

**ABSTRACT**

**Abstract**

The present invention relates to a mobile communication system, and more particularly to a bias-T apparatus and its center conductor for providing radio frequency signals and power source to outdoor equipment of a Base Transceiver Station (BTS) in a mobile communication system. The bias-T apparatus comprises: a housing having an input connector and an output connector integrally formed at both ends of the housing, a housing hole formed through central portions of the input and output connectors, and a fixing hole formed inside of an upper central portion of the housing, the input connector being connected to a transceiver system, the output connector being connected to an antenna; and a center conductor assembly connected to the input and output connectors for providing electric connection for the bias-T apparatus. The center conductor assembly includes a first center conductor having a reception hole extending longitudinally from one end of the first center conductor; and a second center conductor having a shaft which extends from one end of the second center conductor and is inserted in the reception hole, the shaft having an anodized outer surface which enables the distance between the first center conductor and the second center conductor to be reduced up to several microns, thereby increasing capacitance of a formed capacitor.

[Representative FIG.]

FIG. 4

[KEY WORDS]

Bias-T, Center Conductor